

ACCESSION NR: AP034716

5/0064/64/000/004/0307/0310

AUTHOR: Khitrov, V. A.; Zadorozhnyy, V. P.; Smol'yaninov, I. S.; Zhukova, G. P.;
Dugin, N. A.; Kon'yayev, B. Ya.

TITLE: Use of bottoms from SK production as acid corrosion inhibitors.

SOURCE: Khimicheskaya promyshlennost', no. 4, 1964, 307-310

TOPIC TAGS: corrosion inhibitor, rubber production byproduct, still bottom, SK
rubber production, saturated alcohol, unsaturated alcohol, saturated hydrocarbon,
unsaturated hydrocarbon, unpolymerisable hydrocarbon, acid corrosion inhibitor,
Inhibition mechanism, chemosorption

ABSTRACT: The effectiveness of various cuts of still bottoms from rubber production as acid corrosion inhibitors for steels and copper was investigated. Three mixtures were examined: (1) foam reagents (PR) obtained from still bottoms remaining after distillation of technical butanol and comprising 25-35% saturated and unsaturated C₆ and C₈ alcohols, 3-5% butanol, 25-30% hydrocarbons, 30-35% heavy ends and traces of phenols and aldehydes; (2) still bottoms (K0) comprising low boiling saturated and unsaturated hydrocarbons separated from divinyl (35-45C

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fraction contained to 40% amylene and piperazine; 65-80C fraction contained to 70% hexylene and hexadiene and small amounts of benzene, toluene, hexene; (3) motor fuel (MT) comprising a mixture of unpolymerizable hydrocarbons from washed still bottoms. The corrosion inhibiting effects of these products were tested at 0-80C as follows: PR, corrosion of low carbon steel 08 in 1 and 7N HCl and H₂SO₄; PR and KO, corrosion of stainless steel 1Kh18N9T in 1 and 7N HCl, and PR, KO and MT, corrosion of copper in 3N HNO₃. PR effectively retarded corrosion of steel in H₂SO₄ and HCl and of copper in HNO₃. Addition of 0.1 wt.% KI increased the effectiveness (at 80C, by over 2000 times). 2.5% PR plus 0.5% sodium arsenite almost completely prevented corrosion of 08 steel at 80C in 1N HCl. PR almost prevented corrosion of the stainless steel in 1N HCl and retarded corrosion in 3N HCl; corrosion in 7N HCl was very rapid after 6-7 hours. It is suggested the inhibition mechanism involves chemisorption of the PR components on the metal surface. PR and KO inhibited corrosion of copper in HNO₃ below 20C; MT was not especially effective. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

Card 2/3

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963410008-9

ACCESSION NR: AP4034716

SUB CODE: MT, DC

NO REF Sov: 008

OTHER: 000

Cord

3/3

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963410008-9"

S/081/61/000/023/029/061
B138/B101

AUTHORS: Zadorozhnyy, V. P., Khitrov, V. A.

TITLE: Rate of corrosion of steel in acid media containing inhibitors

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 290, abstract 23I270 (Izv. Voronezhsk. gos. ped. in-ta, v. 29, 1960, 141 - 149)

TEXT: An investigation has been made of the kinetics of corrosion processes in mild steel in 1 and 7 N solutions of H_2SO_4 and HCl at temperatures of 20 and 60°C. The solutions contained inhibitors - urotropin, formaldehyde, thiocarbamide, Na_3AsO_4 . Practically no change was found in the kinetic laws governing the dissolution of steel in acids. The influence of temperature, composition, and acid concentration on the time dependence of corrosion and of the rate of corrosion in steel is also shown. (Abstracter's note: Complete translation.)

Card 1/1

Dmitrevskiy, Semen Mikhaylovich, kand. tekhn. nauk; Korunov,
M.M., prof., retsenzent; Zaborozhnyy, V.V., red.

[Lumber transportation in mountainous areas] Gornyi
transport lesa. Moskva, Lesnaia promyshlennost', 1964.
316 p. (NIRA 18:1)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963410008-9

ZADOROZHNYY, Ya. F.

"Experience with the operation of the automobile ZiZ-150 with two trailers,"
Automobile, 1951.

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963410008-9"

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963410008-9

ZADOROZHNYY, Ya., kandidat tekhnicheskikh nauk; LUTSEK, G., inzhener.

Organizing the shipping of sugar beets by trucks. Avt.transp. 32
no.9:7-8 S '54. (MLR 7:11)
(Sugar beets--Transportation) (Transportation, Automotive)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963410008-9"

ZADOROZHNYY, Yakob Fedorovich [Deceased] LIFSHITZ, Genrikh Davidovich; SAL'NIKOV,
G., veduchiy redaktor; NOVIK, O., tekhnichniy redaktor

[Centralising automotive freight transportation] Tsentralizovani
peremennia vantsashiv avtotransportom. Kyiv, Derzh. vyd.-vp
tekhn. lit-ry URSR, 1956. 44 p.
(Transportation, Automotive)

ZADOROZNY, P.

Duodenal diverticulum. Rozhl. chir. 43 no.8:545-549 Ag '64.

1. Ondeloni pro chirurgii hrudni a brisni UVN v Praze (vedouci
doc. dr. B. Placak, CSc.).

ZHDORSKY, S. F.

Impregnation, Artificial - Moldavia

Artificial insemination of cows and ewes on Moldavian collective farms. Sots. zhiv. L4, no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED.

ZADORSKIY, S. P.

Chadyr-Lunga District - Stock and Stock-Breeding

Work of a progressive veterinary station. Sots. zhiv. 15, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

SOLTI, F.; ZADORY, E.; BEKENY, Gy.

Electrocardiographic and circulatory changes in progressive muscular dystrophy. Acta med. acad. sci. hung. 19 no.1:1-10 '63.

1. First Department of Medicine (Director: Prof. I. Rusznyak)
and Department of Neuropathology (Director: Prof. B. Horenyi),
University Medical School, Budapest.
(MUSCULAR DYSTROPHY) (ELECTROCARDIOGRAPHY) (BLOOD CIRCULATION)
(DISPNEA) (BLOOD PRESSURE) (PULSE) (HEART) (PHYSIOLOGY)

ZADORY, E.

HORANYI, M.; ZADORY, E.

Examination of the fragility of blood platelets. Magy. belorv.
Arch. 4 no.2:69-74 1951. (CIA 20:11)

1. Doctors. 2. First Internal Clinic (Director -- Dr. Istvan
Husznyak), Budapest Medical University.

HORANYI, M.; ZADORY, E.

Studies on resistance of thrombocytes. Acta med. hung. 3 no.2:221-232
1952. (CIML 23:4)

1. Of the First Department of Medicine of Budapest University.

ZADORY, Erno, dr.

Radioactive indicators in medicine. Orv. hetil 97 no.34:
930-934 19 Aug 56.

1. A Budapesti Orvostudomanyi Egyetem I. sz. Belklinikajának
(igazgató: Rusznyák, István, dr. egyetemi tanár) köszleménye.
(ISOTOPES
biochem., immunol. & pharmacol. use (Hun))

ZADORY, Erno, dr.

Diagnostic use of radioactive isotopes. Orv. hetil. 97 no.34:
934-939 19 Aug 56.

1. A Budapesti Orvostudomanyi Egyetem I. sz. Belklinikajának
(igazgató: Rusznyák, István, dr. egyetemi tanár) közsémenye.
(ISOTOPES
diag. use (Hun))

ZADORY; ERNO

SOLTI, Ferenc; ZADORY, Erno; Technikai munkatars: Zamolyi Palne

Studies on electrocardiographic and pressure changes in dogs following isolated myocardial necrosis. Kiserletes orvostud. 9 no.3:271-279
July 57.

1. Budapesti Orvostudomanyi Egyetem I. sz. Belklinika.
(MYOCARDIUM, dis.
exper. necrosis, eff. on ECG & blood pressure in dogs (Hun))
(ELECTROCARDIOGRAPHY, exper.
in exper. myocardial necrosis in dogs (Hun))
(BLOOD PRESSURE, in various dis.
exper. myocardial necrosis in dogs (Hun))

ZADORY, Ernö

PAPP, Miklos, (az orvostudomanyok kandidatusa); ZADORY, Erno; SOLTI, Ferenc;
HOLLO, Istvan

Electric phenomena connected with the function of the lymph heart of
frogs. Magy. Tudom. Akad. Orv. Oszt. Kozl. 9 no.1:53-58 1958.

1. MTA Kiseleletes Orvostudomanyi Kutato Intezet Krelettani Osztalya es
Budapesti Orvostudomanyi Egyetem I. sz. Belklinika.

(LYMPHATIC SYSTEM

lymph heart of frogs, electric action potential, ECG (Hun))

(FROGS AND TOADS

same)

(ELECTROCARDIOGRAPHY

of lymph heart of frogs (Hun))

ZADORY, E.

PAPP, M.; ZADORY, E.; SOITI, F.; HOLLO, I.

Electric phenomena in the activities of the frog lymph heart. Acta physiol. hung. 12 no.1-3:153-160 1957.

I. Pathophysiologische abteilung des Forschungsinstituts fur Experimentelle Medizin der Ungarischen Akademie der Wissenschaften und I. Klinik fur Innere Medizin der Medizinischen Universitat, Budapest.

(LYMPHATIC SYSTEM
lymph heart of frogs, electric phenomena of funct. (der))

SZABO, Gyorgy, Dr.; MAGYAR, Zsuzsa; KERTAI, Pal, Dr.; ZADONY, Erno, Dr.

Effect of total body x-irradiation on capillary permeability. Orv.
hetil. 99 no.45:1566-1568 9 Nov 58.

1. A MM. Kiserletes Orvostudomanyi Kutato Intezet Korellettani Osztalyanak es a Budapesti Orvostudomanyi Egyetem I. sz. Belklinikajának
(Igazgató: Rusznyák István dr. egyet tanár) kozleménye.

(CAPILLARY PERMEABILITY, eff. of radiations on
x-ray total body irradiation in dogs (Hun))

(ROENTGEN RAYS, eff.
on capillary permeability, total body irradiation in
dogs (Hun))

STARK, E.; ZADORY, E.; LAPIS, K.

The role of the adrenal cortical hormones in x-ray-induced liver changes. Acta med. acad. sci. Hung. 18 no.1:127-130 '62.

I. Institute of Experimental Medical Research, Hungarian Academy of Sciences, Department of Pathophysiology, Budapest and I Department of Medicine, Medical University, Budapest.

(ADRENAL CORTEX HORMONES pharmacol)
(LIVER radiation eff)
(RADIATION INJURY exper)

ZADOV, Aleksandr Grigor'yevich

ZADOV, Aleksandr Grigor'yevich; ANISIMOV, Aleksandr Mikhaylovich; BAZLOV,
Mikhail Nikolayevich; BRAGIN, Viktor Alekseyevich; GUDKOV, Boris
Aleksandrovich; KOROTKOV, Sergey Tikhonovich; SHTERNER, Semil
Ilovelevich; SHAREMET'YEVA, L.P., vedushchiy red.; TROFIMOV, A.V.,
tekhn.red.

[Petroleum industry in Krasnodar Territory] Neftianaya promyshlen-
nost' Krasnodarskogo kraia. Moskva, Gos.nauchno-tekhn.izd-vo neft.
i gorno-toplivnoi lit-ry, 1957. 69 p. (MIRA 11:2)
(Krasnodar Territory--Petroleum industry)

SOV/93-58-8-3/15

AUTHOR: Zadov, A. G., Vice-chairman

TITLE: Data on the Operation of the Krasnodar Council of the National Economy (Itogi raboty Krasnodarskogo sovnarkhoza)

PERIODICAL: Neftyanoye khozyaystvo, 1958, Nr 8, pp. 9-12 (USSR)

ABSTRACT: The course of development of the Krasnodar petroleum and gas industry drastically changed during its first year under the administration of the Krasnodarskiy sovnarkhoz (Krasnodar Council of the National Economy). The main reason for this change was the discovery of new gas condensate fields, namely, the Leningradskaya, Starominskaya, Chelbasskaya, and Berezanskaya. These were discovered during 1957-58 following the discovery of the Kanevskaya field making Krasnodarskiy kray a potential supplier of gas to the central oblasts in the European part of the Soviet Union, including Leningrad. The gas reserves of the Krasnodarskiy kray are expected to increase by 50-60 billion cu. m. in 1958 and amount to 400 billion

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Data on the Operation (Cont.)

cu. m. in the next seven years. Exploratory drilling increased from 240,000 meters in 1957 to 330,000 meters in 1958, and the petroleum output increased by 12 percent. Drilling crews of the Priazovka drilling department achieved the highest drilling rates. The crews were headed by V. N. Solokhov, P. M. Apanasenko, and S. I. Runchev. In general, the petroleum and gas industry improved under the administration of the Krasnodar Council of the National Economy. The Krasnodar branch of VNIIneft' developed a limed drilling fluid suitable for drilling under complex conditions, and all the 14 oilfields carried out the 1958 five-month oil production plan ahead of schedule. The petroleum and gas industry is cooperating with the other industries. For example, the Khadyzhenskiy remontnomekhanicheskiy zavod (Khadyzhensk Repair and Machine Plant) is producing nonstandard equipment for the sugar refineries under construction. The hydrogen plant is being enlarged so as to satisfy the demand of all industries. The carbon adsorption unit of the plant,

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Data on the Operation (Cont.)

SOV/93-58-8-3/15

which is located on the Zybza, is being enlarged so as to increase the output of liquefied gas, and a similar unit is being constructed at the Tuapse Oil Refinery. The Armavir TETs and the Pashkovskaya TETs have been switched to operation by gas. The Armavir Carbon Black Plant which operates on green oil will also be switched to gas. The gas administration of the Glavgaz system has been reorganized and entrusted with the drilling of gas wells, the production, primary processing, and transportation of natural gas, and founding the first petrochemical enterprises in Krasnodarskiy kray. The author lists eight problems which are to be solved by the petroleum and gas industry in the near future. Among these problems is the necessity of water injection at the Anastasiyevsko-Troitskoye oilfield and at the Novodmitriyevskaya oil-bearing formation. The author states that Krasnodarskiy kray will direct its activities

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Data on the Operation (Cont.)

SOV/93-58-8-3/15

towards the realization of the resolution made by the May Plenary Session of the Central Committee of the Communist Party regarding the more rapid development of the petrochemical industry in the Soviet Union.

ASSOCIATION: Krasnodar Council of the National Economy (Krasnodarskiy sovnarkhoz)

1. Petroleum industry--USSR
2. Industrial gas--Production
3. Petroleum--Production
4. Refineries--Construction

Card 4/4

ZADOV, A.G.

Prospects for the development of the petroleum and gas industries
in Krasnodar Territory. Neft.khoz. 37 no.2:10-13 p '59.
(MIRA 12:4)

1. Zamestitel' predsedatelya Soveta narodnogo khozyaystva
Krasnodarskogo ekonomicheskogo khozyaystva.
(Krasnodar Territory--Petroleum industry)
(Krasnodar Territory--Gas, Natural.)

ZADOV, A.G.

Improve methods of developing and exploiting oil- and gas-condensate fields of Krasnodar Territory. Neft. khoz. 39 no.10:56-61 O '61.
(MIRA 15:1)

(Krasnodar Territory--Oil fields--Production methods)

ZADOV, A.G.

Casinghead gas and its use on oil fields: Krasnodar Territory.
Neft. khoz. 40 no.12:45-48 D '62. (MIRA 16:7)

(Krasnodar Territory--Gas, Natural)

ZABOV, A.G.

Development of the gas industry of the Northern Caucasus. Gaz.prom.
20 no.513-6 '65. (MIRA 18:6)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963410008-9

BRAGIN, V.A.; KARAYEV, A.K.; ZADOV, A.G.

Petroleum industry of the Northern Caucasus. Neft. khoz.
(MIRA 17:12)
42 no.9/10:31-38 S-O '64.

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963410008-9"

ZADOV, A.G.

Oil and gas, raw-stock base for the development of macromolecular
chemistry in the Northern Caucasus. Neft. khoz. 42 no.8:1-4 Ag '64.
(MIRA 17:9)

ZADOV, A.P., inzh.; LIADZE, V.G., inzh.

Concerning an accident involving a VMB-10 oil-type electric
cutout. Prom.energ. 17 no.7:29 J1 '62. (MORA 15:7)
(Electric cutouts) (Electric substations)

GUBANOV, A.I.; ZADOV, L.P.; SAZONOV, B.F.; SURGACHEV, M.I.; ASHIROV, K.B.

Problems in prospecting for commercial deposits and the complex
of well tests for appraising oil reserves and programming the
development in Kuybyshev Province. Trudy VNII no.33:55-66 '61.

1. Gosudarstvennyy institut po proyektirovaniyu i issledovatel'nykh
kakim rabotam neftedobyvayushchey promyshlennosti vostochnykh
rayonov strany.
(Kuybyshev Province—Petroleum geology)

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CIA-RDP86-00513R001963410008-9

OVANESOV, G.P.; ZOLCHEV, T.M.; ZABOV, L.P.

Oil prospecting in the Volga-Ural region for the last 100 years.
Geol. nefti i gaza 8 no.9:28-32 S '64. (MIRA 17:11)

1. Sovet narodnogo khozyaystva RSFSR i Sredne-Volzhskiy sovet
narodnogo khozyaystva.

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963410008-9"

ZABOV, YA.

ZABOV, YA. Cycle graph of forest industry in the Soviet Union. p. 59.
Meeting of the Technical Council of the Ministry of Heavy Industry. p. 61.
Conference on organizing the production of Bulgarian bleaching clay. p. 62.

Vol. 5, No. 8, 1956.
TEZHKA, POMISHLENOST
TECHNOLOGY
Sofia, Bulgaria

See: East European Accession, Vol. 6, No. 2, Feb. 1957

ZHOLCOV, Viktor Vladimirovich; ZVEREV, Grigoriy Ivanovich; GUBKIN, S.I.,
prof., doktor khim.nauk, retsenzent [deceased]; PROZOROV, L.V.,
doktor tekhn.nauk, retsenzent; BOZANOV, M.V., inzh., retsenzent;
ZAILOV, Ye.B., inzh., retsenzent; PERLIN, I.L., prof., doktor tekhn.
nauk, red.; RZHEZNIKOV, V.S., red.; ARKHANGEL'SKAYA, M.S., red.
izd-va; VAYNSHTETN, Ye.B., tekhn.red.

[Press forging of metals] Pressovanie metallov. Pod red. I.L.
Perlina. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i
tsvetnoi metallurgii, 1959. 542 p. (MIRA 12:12)

1. Deystvitel'nyy chlen AN BSSR (for Gubkin).
(Forging) (Drawing (Metalwork)) (Extrusion (Metalwork))

KRYSENKO, N.S.; POZNYAKOV, V.Ya.; GAZARYAN, L.M.; ZADOV, Ye.B.;
KADYRZHANOV, K.K.; KUZ'MIN, A.V.; TROITSKIY, A.V.; LEZGINTSEV, G.M.;
MITROFANOV, S.I.; SOLCV'IEV, V.Ya.; SOBOL', S.I.; MYAGKOVA, T.M.;
GAYLIT, A.A.; GENIN, N.N.; GRATSERSHTEYN, I.M.; SKORNIKOV, Yu.T.,
referent

Fourth plenum of the central administration of the Scientific
Technological Society for Nonferrous Metallurgy. TSvet. met.
38 no.5:90 My '65. (MIRA 18:6)

1. Chlen TSentral'nogo pravleniya Nauchno-tehnicheskogo obshchestva
tsvetnoy metallurgii i zavod "Ukrts'ink" (for Krysenko).
2. Chlen
TSentral'nogo pravleniya Nauchno-tehnicheskogo obshchestva tsvetnoy
metallurgii i "Severonikel'" (for Poznyakov).
3. Institut metallur-
gii im. Baykova (for Gazaryan).
4. Predsedatel' soveta Nauchno-
tekhnicheskogo obshchestva Kol'chuginskogo zavoda OTsM (for Zadov).
5. Chlen TSentral'nogo pravleniya Nauchno-tehnicheskogo obshchestva
tsvetnoy metallurgii, Sovet narodnogo khozyaya va Kazakhskoy SSR
(for Kadyrzhanov).
6. Predsedatel' gorno-geologicheskoy sektsii
TSentral'nogo pravleniya Nauchno-tehnicheskogo obshchestva tsvetnoy
metallurgii; Gosudarstvennyy komitet Soveta Ministrov RSFSR po
koordinatsii nauchno-issledovatel'skikh rabot (for Kuz'min).
7. Chlen TSentral'nogo pravleniya Nauchno-tehnicheskogo obshchestva

(Continued on next card)

KRYSENKO, N.S.--- (continued) Card 2.

tsvetnoy metal'urgii, Sovet narodnogo khozyaystva SSSR (for Troitskiy). 8. Gosudarstvennyy institut po proyektirovaniyu predpriatiy tsvetnoy metallurgii (for Lezgintsev). 9. Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh metallov (for Mitrofanov, Sobo., Genin). 10. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut splavov i obrabotki tsvetnykh metallov (for Selov'yev). 11. Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut mekhanicheskoy obrabotki poleznykh iskopayemykh (for Myagkova). 12. Gosudarstvennyy institut po proyektirovaniyu predpriatiy tsvetnoy metallurgii (for Gaylit).

BOROK, B.A.; GAVRILOVA, V.K.; KARPMAN, G.M.; TRIFONOV, Ye.A.; ZADOV, Ye.B.

Pressing and rolling ceramic metal titanium pipes. TSvet. set. 33
no. 9:66-68 S '60. (MIRA 13:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii
(for all except Zadov). 2. Kol'chuginskiy zavod im. Ordzhonikidze
(for Zadov).

(Ceramic metals)

(Metal powder products)

ZADOVSKAYA, I.S.

Lab Gen'l Pharmacology, Inst Exp'tl Med, Acad Med Sci USSR (Leningrad)

Outstanding Russian Physiologist

So: Fiziologicheskiy Zhurnal Vol 37, No 6, 1951

ZADOYA, A. F. AND GLOTSER, L. M.

38098. ZADOYA, A. F. AND GLOTSER, L. M.
Sovremennye sostoyaniye mekhanicheskogo obezprepeivaniya i puti
yego razvitiya. Nauch.- issled. trudy (nauch. issled. in-t sherstyanov
prom-sti), vyp. 5, 1949, s. 3-24. - Bibiligr: 5 nazv.

EXCERPTA MEDICA Sec.10 Vol.11/6 Obst. & Gyne June 58
ZADOYA, B. N.

1030. CHARACTERISTICS OF THE HEAD-ZAKHARIN ZONES IN CHRONIC DISEASES OF THE FEMALE GENITAL TRACT (Russian text) - Zadoya B. N.
VOVR. KURORT. 1956, 12 (195-200)

To evaluate the efficacy of treatment skin chronaxy and perspiration in the Head-Zakharin zones were determined in 25 patients suffering from chronic diseases of the genital tract. The hyperesthetic zones were localized mostly in the iliac region. A shortening of the chronaxy was observed in the Head-Zakharin zones as compared with the symmetrical parts of the opposite side. In all instances where diminished pain was noted as a result of treatment the shortened skin chronaxy and rheobase in the Head-Zakharin zones either became normal or showed a tendency to normalization. In cases where there was no decrease of pain at the end of treatment the shortened skin chronaxy persisted. In these zones a constant perspiration and an insignificant elevation of skin temperature were noted. All measurements were performed with Mishuk's apparatus.

(S)

ZADOYAN, M.A.

Strain conditions in cylindrical tubes in elastic media accounting
for creep of materials. Izv. AN ARM. SSR. Ser. Fiz. nauk. 9 no. 9:47-65
'56. (MLRA 10:2)

1. AN Armyanskoy SSR.
(Creep of materials) (Tubes) (Strains and stresses)

ZADOYAN, M.A.

Effect of uniform temperature distribution on the elastic plastic
state of rectangular concrete blocks. Dokl. Akad. Nauk SSSR. 23 no.5:
193-198 '56.
(MLRA 10:2)

1. Institut matematiki i mekhaniki Akademii nauk Arzjanskoy SSR.
Predstavleno N.Kh.Arutyunyanom.
(Concrete blocks) (Expansion of solids)

ZADOYAN, M.A.

One problem of the stress limit of concrete blocks. Dokl. AM
Armen. SSR 24 no.5:193-199 '57. (MIRA 10:7)

1. Institut matematiki i mekhaniki Akademii nauk Armysanskoy SSR.
Predstavleno N.Kh.Arutyunyanom.
(Concrete blocks) (Strains and stresses)

ZADOYAN M.A.
ZADOYAN, M.A.

Thermal and stressed state of concrete blocks with consideration of
the creep of materials. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 10
no. 5:73-98 '57. (KIRA 11:2)

1. Institut matematiki i mehaniki AN ArmSSR.
(Concrete blocks) (Creep of materials)

ZADOYAN, M.A.

Thermal stresses in infinite concrete plates taking creep into
consideration. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 11 no.1:
27-46 '58. (Concrete slabs) (Creep of materials)
(MIRA 11:6)

ZADOVAN, M.A.

Variation equations of the theory of creep. Dokl. AN Arm. SSR
26 No.5:263-268 '58. (MIRA 11:7)

I. Institut matematiki i mekhaniki AN ArSSR. Preistavleno
N.Xh. Arutyunyanom.
(Creep of materials)

ZADOYAN, M.A. (Yerevan)

Compression of a lengthwise plastically nonuniform strip by two
rigid plates. Izv.AN SSSR.Otd.tekh.nauk.Mekh. i mashinostr.
no.4:142-145 Jl-Ag '62. (MIRA 15:8)
(Deformations (Mechanics))

ACCESSION NR: AP4035804

S/0020/64/156/001/0038/0039

AUTHOR: Zadoyan, M.A.

TITLE: On a particular solution of the equations of the theory of ideal plasticity

SOURCE: AN SSSR. Doklady*, v. 156, no. 1, 1964, 38-39

TOPIC TAGS: plasticity, elasticity theory, ideal plasticity

ABSTRACT: A particular solution is found to the general (three-dimensional) equations of the theory of ideal plasticity. To this solution correspond several special problems: pure bending of a rectangular plate, space-motion of a plastic material between rough plates, triaxial compression of a rectangular prism, etc. The general relations in the theory of ideal plastic flow, under the GUBER-MISES conditions, in Cartesian coordinates, have the form

$$\frac{\partial \sigma_x}{\partial x} + \frac{\partial \tau_{xy}}{\partial y} + \frac{\partial \tau_{xz}}{\partial z} = 0, \quad \frac{\partial \tau_{xy}}{\partial x} + \frac{\partial \sigma_y}{\partial y} + \frac{\partial \tau_{yz}}{\partial z} = 0, \quad \frac{\partial \tau_{xz}}{\partial x} + \frac{\partial \tau_{yz}}{\partial y} + \frac{\partial \sigma_z}{\partial z} = 0; \quad (1)$$

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ACCESSION NR: AP4035804

$$(\sigma_x - \sigma_y)^2 + (\sigma_y - \sigma_z)^2 + (\sigma_z - \sigma_x)^2 + 6(\tau_{xy}^2 + \tau_{yz}^2 + \tau_{xz}^2) = 6k^2; \quad (2)$$

$$\epsilon_x = \frac{\partial u}{\partial x} = \lambda(2\sigma_x - \sigma_y - \sigma_z); \quad (3)$$

$$\epsilon_y = \frac{\partial v}{\partial y} = \lambda(2\sigma_y - \sigma_z - \sigma_x); \quad (3)$$

$$\epsilon_z = \frac{\partial w}{\partial z} = \lambda(2\sigma_z - \sigma_x - \sigma_y); \quad (3)$$

$$2\gamma_{xy} = \frac{\partial u}{\partial y} + \frac{\partial v}{\partial x} = 6\lambda\tau_{xy}, \quad 2\gamma_{yz} = \frac{\partial v}{\partial z} + \frac{\partial w}{\partial y} = 6\lambda\tau_{yz}, \quad 2\gamma_{xz} = \frac{\partial w}{\partial z} + \frac{\partial u}{\partial x} = 6\lambda\tau_{xz}. \quad (4)$$

From these equations a series of equations are finally obtained.

$$\sigma_x = \sigma_z + (2\epsilon_x + \epsilon_y) \sqrt{\frac{k^2 - \tau_{xx}^2 - \tau_{yz}^2}{\epsilon_x^2 + \epsilon_x\epsilon_z + \epsilon_y^2 + \tau_{xy}^2}}; \quad (11)$$

$$\sigma_y = \sigma_z + (\epsilon_x + 2\epsilon_y) \sqrt{\frac{k^2 - \tau_{xx}^2 - \tau_{yz}^2}{\epsilon_x^2 + \epsilon_x\epsilon_y + \epsilon_y^2 + \tau_{xy}^2}}; \quad (12)$$

$$\tau_{xy} = \tau_{xz} \sqrt{\frac{k^2 - \tau_{xx}^2 - \tau_{yz}^2}{\epsilon_x^2 + \epsilon_x\epsilon_y + \epsilon_y^2 + \tau_{xy}^2}}; \quad (13)$$

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ACCESSION NR: AP4035804

$$u = 2 \int \sqrt{\frac{e_x^2 + e_x e_y + e_y^2 + r_{xy}^2}{k^2 - r_{xx}^2 - r_{yy}^2}} \tau_{xz} dz + A_1 xz + C_1 yz + A_0 x + Dy + Gz + E; \quad (14)$$

$$v = 2 \int \sqrt{\frac{e_x^2 + e_x e_y + e_y^2 + r_{xy}^2}{k^2 - r_{xx}^2 - r_{yy}^2}} \tau_{yz} dz + C_1 xz + B_1 yz + (2C_0 - D) x + B_0 y + Hz + F; \quad (15)$$

$$w = \frac{A_1}{2} x^2 - \frac{B_1}{2} y^2 - \frac{A_1 + B_1}{2} z^2 - C_1 xy - Gx - Hy - (A_0 + B_0) z - Q. \quad (16)$$

The solution to (11)-(16) involves 17 arbitrary constants. When $A_1 \neq 0$ and $B_1 \neq 0$, while all the other constants are zero, we have the case of pure bending of a rectangular plate. When only A , e , C , α , are different from 0, we get the case of plane deformation of a layer compressed by rough plates. Taking $A_1 = B_1 = C_1 = G = H = Q = a = \alpha = 0$, we have the case of space-motion of matter between rough plates, etc. Orig. art. has: 16 equations.

ASSOCIATION: Institut matematiki i mekhaniki Akademii nauk Arm. SSR (Institute of Mathematics and Mechanics, Academy of Sciences, Armenian SSR)

Card 3/4

ACCESSION NR: AP4035804

ENCL: 00

SUBMITTED: 04 Jan 64

OTHER: 003

SUB CODE: ME

NR REF Sov: 008

Card

4/4

ZADOYAN, M.A.

Partial solution of equations in the theory of ideal plasticity
in cylindrical coordinates. Dokl. AN SSSR 157 no.1:73-75
J1 '64 (MIRA 17:8)

1. Institut matematiki i mekhaniki AN ArmSSR. Predstavlene
akademikom L.I. Sedovym.

ZADOYAN, M.A.

Two problems in the theory of ideal plasticity. Izv. AN Arm. SSR.
Ser. fiz.-mat. nauk 17 no.6:73-81 '64. (MIRA 18:3)

1. Institut matematiki i mekhaniki AN ArmSSR.

ZADOYAN, M.A.

Spatial stressed state of a plastic layer compressed between two
rough plates. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 17 no.4:63-69
'64. (MIRA 17:21)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.

ZADOYAN, M. A.

One particular solution to certain equations in the theory of
ideal elasticity. Dokl. AN SSSR 156 no. 1:38-39 My '64.
(MIRA 17:5)

1. Institut matematiki i mekhaniki AN Armyskoy SSSR.
Predstavлено академиком L. I. Sedovym.

ZADOYAN, M.A.

Creep problem for a thick-walled cylindrical tube subjected
to internal pressure and neutron irradiation. Izv. AN Arm.
SSR. Ser. fiz.-mat. nauk 16 no.4:73-78 '63.

(MIRA 16:8)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.

ZADOYAN, M.A.

Creep in the torsion of a circular conical rod made of material characterized by non-steady-state inhomogeneity. Dokl. AN Arm. SSR 36 no.3:153-156 '63. (MIRA 16:10)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
Predstavлено akademikom AN Armyanskoy SSR N.Kh. Arutyunyanom.

ZADOYAN, M.A. (Yerevan)

"On the creep of a non-homogeneous half-plane subjected to a concentrated force"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

ZADOYAN, M.A.

Extrusion of a plastically inhomogeneous material from a
compressible cylindrical bush. Izv. AN Arm. SSR. Ser. fiz.-mat.
nauk 16 no.3:57-63 '63. (MIRA 16:8)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Plasticity) (Strains and stresses)

ZADOYAN, M.A.

Flow of a plastic inhomogeneous material through a tapering
channel. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 15 no.3:51-57
'62. (MIRA 15:9)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Plasticity)

ZADOYAN, M.A.

Problem of creep of an irradiated rod. Izv. AN Arm. SSR. Ser.
fiz.-mat.nauk 14 no.4:115-121 '61. (MIRA 14:11)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Creep of materials)
(Elastic rods and wires)

16.1200

S/022/62/015/003/003/002
D234/D508

AUTHOR: Zadoyan, M.A.

TITLE: The flow of a plastically inhomogeneous substance
through a converging channel

PERIODICAL: Akademiya nauk Armyanskoy SSR. Izvestiya, v.15, no.3,
1962, 51-57

TEXT: The walls of the channel are rough plates inclined
with respect to each other; the plastic constant of the substance
is assumed to be proportional to a power of the radius (in polar
coordinates). The differential equations of equilibrium are solved
together with the condition of plasticity. The solution of A.
Nadai is obtained as a special case. There are 2 figures. /B

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR
(Institute of Mathematics and Mechanics, AS ArmSSR)

SUBMITTED: December 21, 1961
Card 1/1

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963410008-9

ZADOYAN, M.A. (Yerevan)

Creep of a concrete slab at high temperature. Izv. AN SSSR.
Gidrotekh.nauk.Mekh. i mashinostr. no.4:130-135 Ju-lig '61.
(MIRA 14.8)
1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Concrete slabs)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963410008-9"

24.4200 1327 2607 4512

39392
S/022/61/014/004/006/010
D299/D302

AUTHOR: Zadoyan, M. A.

TITLE: On creep of an irradiated beam (bar)

PERIODICAL: Akademiya nauk Armyanskoy SSR. Izvestiya. Seriya fizi-
ko-matematicheskikh nauk; v.14, no. 4, 1961, 115-120

TEXT: Bending of an irradiated beam under conditions of transient
creep is considered on the basis of the stress-strain relations of
creep, proposed by Yu. N. Rabotnov (Ref. 1: Nekotoryye voprosy te-
orii polzuchestsi (Some Problems of Creep Theory), "Vestnik MGU",
no. 10, 1948). An irradiated metal beam of rectangular section is
considered. If the upper ($x = h$) and the lower ($x = -h$) ends of
the beam are exposed to a stationary neutron flux, then the inten-
sities of radiation at the point x are

$$I_1(x) = I_0 e^{-\mu(h-x)}, \quad I_2(x) = I_0 e^{\gamma\mu(h+x)}$$

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X

On creep of an ...

where I_0 is the intensity of radiation on the surface $x = \pm H$,
 and μ - the macroscopic section of the material. The total neutron-flux (the radiation dose) is

$$\Theta(x) = 2\theta_0 e^{-\mu h} ch \mu x \quad (1)$$

where $\theta_0 = I_0 T_0$ and T_0 is the time of irradiation. Assume the beam undergoes, after irradiation, pure bending at high temperature. The strain components ε_y and the stress components σ_y are non-zero. It is further assumed that the creep properties of the metal change as a result of the irradiation. The stress-strain relations are (by Ref. 1: Op.cit.):

$$\varphi(\theta) \varepsilon^m(x, t) = \sigma(x, t) + \int_0^t \frac{\omega(\theta)}{f(t-\tau)} \sigma(x, \tau) d\tau \quad (2)$$

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On creep of an ...

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The functions φ and ω represent the effect of irradiation and are determined experimentally. With new notations for φ and ω , and

$$\varepsilon(x, t) = \frac{x}{\rho(t)} \quad (3)$$

(ρ being the beam curvature, yet to be determined), one rewrites Eq. (2) as

$$\frac{\Phi(x)x^m}{\rho^m(t)} = \sigma(x, t) + \int_0^t \frac{\Omega(x)}{f(t-\tau)} \sigma(x, \tau) d\tau \quad (4)$$

If, up to a certain value of radiation dose, φ and ω can be approximated by linear functions, then

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$$\begin{aligned}\Phi(x) &= A + 2\alpha\theta_0 e^{-\mu h} \operatorname{ch} \mu x, \\ \Omega(x) &= B + 2\beta\theta_0 e^{-\mu h} \operatorname{ch} \mu x\end{aligned}\quad (5)$$

the positive constants A and B represent the values of Φ and Ω for the corresponding non-irradiated beam. The parameters α and β are contributed by the irradiation; they are determined by experiment. From the equilibrium condition

$$2 \int_0^h \sigma(x, t) x dx = H = \text{const} \quad (6)$$

(H being the external bending moment) and Eq. (4), one derives the integral equation

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On creep of an ...

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D299/D302

$$\begin{aligned} \sigma(x, t) + \int_0^t N(x, t-\tau) \sigma(x, \tau) d\tau &= \\ = F(x, t) + \int_0^h M(\xi, x) \sigma(\xi, t) d\xi & \quad (12) \end{aligned}$$

where

$$F(x, t) = \frac{H}{2J} \Phi(x) x^m \left[1 + \gamma \int_0^t \frac{d\tau}{f(t-\tau)} \right] \quad (13)$$

$$M(\xi, x) = \frac{\Phi(x) x^m \xi}{J} \left[\frac{\gamma'}{\Omega(\xi)} - 1 \right] \quad (14)$$

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S/022/61/014/004/006/010
D299/D302

On creep of an ...

$$N(x, t - \tau) = \frac{f(x)}{f(t - \tau)}, \quad \gamma = \frac{J}{J_0} \quad (15)$$

Thus, the problem of determining the stress in the irradiated beam reduces to solving integral equation (12). By means of operators, Eq. (12) is rewritten as

$$\sigma = F + (M - N) \sigma \quad (17)$$

This equation is solved by the method of successive approximations, yielding

$$\sigma_n = F + \sum_{k=1}^n (M - N)^k F \quad (19)$$

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S/022/61/014/004/006/010
D299/D302

On creep of an ...

For $n \rightarrow \infty$, $\sigma_n \rightarrow \sigma$, the solution is

$$\sigma(x, t) = F(x, t) + \sum_{k=1}^{\infty} (M - N)^k F \quad (23)$$

The obtained solution is unique. From Eq. (23) it is possible to obtain an approximate, yet simple formula for the stress:

$$\begin{aligned} \sigma(x, t) \approx \sigma_1(x, t) &= F(x, t) + \int_0^h M(\xi, x) F(\xi, t) d\xi - \\ &- \int_0^t N(x, t - \tau) F(x, \tau) d\tau \end{aligned} \quad (26)$$

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D299/D302

On creep of an ...

Setting

$$f(t - \tau) = (t - \tau)^v, \quad 0 < v < 1$$

one obtains

$$\sigma_1(x, t) = \frac{Hx^m}{2J} \bar{\rho}(x) \left\{ 1 - \frac{\Omega(x) - t}{1 - v} \tau^{1-v} - \frac{\Omega(x)}{1 - v} K(t) \right\} \quad (29)$$

where

$$K(t) = \int_0^t \frac{\tau^{1-v}}{(t - \tau)^v} d\tau \quad (30)$$

Thus, if the effect of irradiation (the inhomogeneity of the material) is taken into account, creep influences not only the strain, as in the case of homogeneous beams, but also the stress. There are 2 Soviet-bloc references.

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On creep of an ...

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S/022/61/014/004/006/010
D299/D302

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR
(Institute of Mathematics and Mechanics AS Armenian
SSR)

SUBMITTED: March 15, 1961

X

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29071
S/179/61/000/004/015/019
E081/E335

AUTHOR: Zadoyan, M.A. (Yerevan)

TITLE: The creep of concrete plates at high temperatures

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
tekhnicheskikh nauk. Mekhanika i mashinostroyeniye.
no. 4, 1961, pp. 130 - 135

TEXT: The paper is a continuation of previous work
(Ref. 4 - DAN, ArmSSR, 1960, v. 30, no. 5; Ref. 8 - Izv.
ArmSSR, seriya fiz.mat.nauk, 1958, v. 11, no. 1). Earlier
work on concrete is reviewed and curves are obtained for the
change of elasticity modulus and creep with temperature.
Assuming that the modulus and creep with temperature varies both
with position and time, and that the plate is obtained for the
simply supported, the stress in the edges of the plate varies both
on elasticity modulus which allows for the effect of temperature
representation and a method of successive approximation, the
equation for the stress is derived in a form more convenient
for calculation. As a numerical example, the stress

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S/179/61/000/004/015/019
E081/E335

The creep of concrete ...

distribution is found in a plate exposed to gamma rays, as
in a nuclear reactor. The law of absorption of the gamma
rays is taken as:

$$J(x) = J_0 e^{-\mu_o x}, \quad J_0 = E_1 I_1 \mu_1$$

where E_1 - the energy of the gamma quanta,

I_1 - flux of gamma quanta,

μ_1 - coefficient of energy absorption,

μ_o - coefficient of total absorption of gamma quanta.

The equation of heat-conduction is then:

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The creep of concrete

29071
4/17/61/000/004/015/019
D001/E535

$$\kappa_0 \frac{d^2 T}{dx^2} + J_0 e^{-\mu_0 x} = 0$$

Where κ_0 is the thermal conductivity coefficient. This equation is solved and the solution evaluated numerically, taking the thickness of the plate as 0.3 m, the internal and external temperatures as 300 and 100 °C, respectively,

$\mu_0 = 0.05 \text{ cm}^{-1}$, $\nu_1 = 0.625 \text{ cm}^{-1}$, $E_1 = 2 \text{ MeV}$, $I_1 = 1.25$, $k_0 = 1.25 \text{ kcal/m}^2 \text{ deg.hr}$. The results are shown in Fig. 5; the upper curve represents the temperature distribution and the lower curves the relative stress distribution at short and long times. V.A. Kharlamov, G.N. Maslov, N.Kh. Arutyunyan and V.N. Murashev are mentioned in the article for their contributions in this field.

There are 5 figures, 3 references: 7 Soviet-bloc and 1 non-Soviet-bloc. The English-language reference mentioned is:

Ref. 6 - M.I. Hillier - J. Nuclear Energy, v. 8, November,

Card 3/4

The creep of concrete

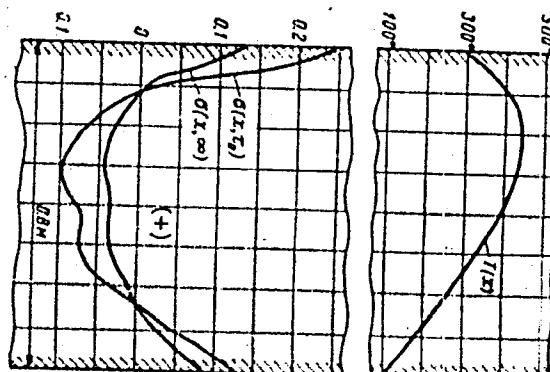
29071
S/179/61/000/004/015/019
EO31/E335

N.Y., London, Paris, 1958.

ASSOCIATION: Institut matematiki i mekhaniki Akademii nauk
Armyanskoy SSR (Institute of Mathematics and
Mechanics of the Academy of Sciences, Armenian
SSR)

SUBMITTED: November 4, 1960

FIG. 5:



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ZADOYAN, M.A.

Creep of a concrete slab under gamma radiation. Dokl. AN Arm. SSR 30
no. 5:257-264 '60. (MIEA 13:8)

1. Institut matematiki i mekhaniki Akad. nauk Artyanskoy SSR. Prei
stavleno akad. AN Artyanskoy SSR N.Kh.Arutyunyanom.
(Gamma rays) (Creep of materials)
(Concrete slabs)

ZADOYAN, M.A.

Creep of cylindrical tubes at high temperatures. Dokl. AN
Arm. SSR 31 no. 4:201-209 '60. (MIRA 13:12)

1. Institut matematiki i mekhaniki Akademii nauk Armyanskoy
S.S.R. Predstavлено akademikom AN Armyanskoy SSR N.Kh.
Arutyunyanom.

(Pipe, Concrete) (Creep of materials)

ZADOYAN, M.A.

Propagation of plastic zones in a beam under periodic loading.
Izv. AN Arm.SSR.Ser.fiz.-mat.nauk 13 no.1:81-88 '60.

(MIRA 13:8)

1. Institut matematiki i mehaniki AN Armyanskoy SSSR.
(Girders)

ZADOYAN, M.A.

Extension of the plastic zone in a heterogeneous tube subjected
to dynamic influence of pressure. Izv. AN Arm. SSR. Ser. fiz.-
mat. nauk 13 no. 3:89-95 '60. (MIRA 13:9)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Plasticity)

.81338

S/022/60/013/003/002/006
C111/C222

11.2313

AUTHOR: Zadoyan, M.A.

TITLE: The Spreading of the Plastic Zone in an Inhomogeneous Tube Under
the Dynamic Influence of the Pressure

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-
matematicheskikh nauk, 1960, Vol. 13, No. 3, pp. 89 - 95

TEXT: At the first All Union Congress for Mechanics in Moscow on February
29, 1960 the author reported about the contents of the present paper. The
author considers the plastic zone which spreads within a long inhomogeneous
cylindric tube after a sudden uniform load or a sudden load impulse. It is
assumed that

$$(1) \quad \sigma_0 - \sigma_r = e^{-\mu r} [\alpha + s (\epsilon_0 - \epsilon_r)^m]$$

and that the modulus of shear is

$$(2) \quad G(r) = G_0 e^{-\gamma r} .$$

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84338

The Spreading of the Plastic Zone in an
Inhomogeneous Tube Under the Dynamic Influence
of the Pressure

S/022/60/013/003/002/006
C111/C222

The author investigates the differential equation of the motion in the elastic and plastic state. He gives the minimal values of the load for which plastic zones arise. He calculates values for which there appears a purely plastic state.

The author mentions A.A. Il'yushin, P.M. Ogibalov and Ye.Kh. Agstabayan.
There are 2 references: 1 Soviet and 1 Polish.

ASSOCIATION: Institut matematiki i mehaniki AN Armyanskoy SSR
(Institute of Mathematics and Mechanics of the Academy
of Sciences Armyanskaya SSR)

SUBMITTED: February 12, 1960

Card 2/2

S/022/60/013/01/03/010
C 111/ C 333

AUTHOR: Zadoyan, M. A.

TITLE: On the Propagation of Plastic Zones in a Beam Under Impulse Stress

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1960, Vol. 15, No. 1, pp. 81-88

TEXT: The author considers an ideal plastic freely supported beam to which an impulse of cosine-form distribution over the length of the beam is given. He sets up the equations of motion in the elasto-plastic and in the purely elastic domain. The total solution must be obtained by combination of the two partial solutions on the boundary of the two domains. The author renounces a rigorous solution and gives an approximate solution with the aid of successive approximations. The position of the neutral axis for different moments is graphically represented. The solutions hold for $1 \leq \beta < 1.5$, $\beta = \frac{v}{V}$, V given velocity. ✓B

The author mentions A. A. Gvozdev, M. P. Galin, Kh. A. Rakhmatulin and G. S. Shapiro.

There are 2 figures, and 8 references: 3 Soviet and 5 American.

ASSOCIATION: Institut matematiki i mehaniki AN Armyanskoy SSR (Institute of Mathematics and Mechanics AS Armyanskaya SSR)

SUBMITTED: June 2, 1959

Card 1/1

Report Presented at the 1st All-Union Congress of Theoretical and Applied Mechanics,
Moscow, 27 Jan - 1 Feb 1960.

120. Prof. S. A. Gavrilov (Chairman) On some new forms of the theory of elasticity expressed in numerical functions.
121. Dr. V. N. Dobrovolsky (Chairman) Generalization of the method of direct stresses in structural mechanics.
122. Dr. V. N. Kargin (Chairman) On the method of "fictitious" surfaces.
123. Dr. A. A. Dukhov (Chairman) Experimental data concerning the nature of plasticity.
124. Dr. V. V. Kostylev (Chairman) Some problems of the theory of plasticity.
125. Dr. G. P. Prokof'ev (Chairman) A plastic stress analysis of cylindrical shells via rectangular finite difference elements.
126. Dr. I. V. Olenich (Chairman) Numerical illustration of theory of elasticity.
127. Dr. G. P. Prokof'ev (Chairman) The construction of solutions of numerically convergent equations by means of special finite difference methods.
128. Dr. G. P. Prokof'ev (Chairman) A method of calculating the influence of various factors on the life time of cylindrical shells.
129. Dr. F. Shatilov (Chairman) The plasticity of an ellipsoid.
130. Dr. I. G. Gulyaev (Chairman) A method of calculating the influence of various factors on the strength of the structure of aircraft.
131. Dr. G. P. Prokof'ev (Chairman) An application of the method of finite differences to the solution of inverse problems.
132. Dr. P. P. Prokof'ev (Chairman) On the shear strength of cylindrical shells.
133. Dr. V. V. Kostylev (Chairman) On friction in metal shells.
134. Dr. S. N. Slobodtsev (Chairman) The deformation of the ground under load.
135. Dr. G. P. Prokof'ev (Chairman) On the strength of shells under the action of external forces.
136. Dr. G. P. Prokof'ev (Chairman) On the strength of shells under the action of internal forces.
137. Dr. A. A. Kholodenko (Chairman) Determination of the density of a metal from cyclic loading.
138. Dr. G. P. Prokof'ev (Chairman) The internal friction of materials.
139. Dr. G. P. Prokof'ev (Chairman) On the propagation of elastic waves in shells.
140. Dr. G. P. Prokof'ev (Chairman) On ultrasonic testing of a different material.
141. Dr. G. P. Prokof'ev (Chairman) Elasticity properties of a plasticity.
142. Dr. G. P. Prokof'ev (Chairman) On the mechanical properties of some nonlinear elastic materials.
143. Dr. I. G. Gulyaev (Chairman) On the characteristics of some nonlinear elastic materials.
144. Dr. G. P. Prokof'ev (Chairman) On the propagation of plastic waves.
145. Dr. G. P. Prokof'ev (Chairman) On the propagation of plastic waves in the structure.
146. Dr. G. P. Prokof'ev (Chairman) On the propagation of plastic waves in cylindrical shells.
147. Dr. I. G. Gulyaev (Chairman) On the construction of fiber's vibration.
148. Dr. A. A. Kholodenko (Chairman) The state of stress in compression and tension.
149. Dr. G. P. Prokof'ev (Chairman) The state of stress in compression and tension.
150. Dr. G. P. Prokof'ev (Chairman) The state of stress in compression and tension.
151. Dr. G. P. Prokof'ev (Chairman) The influence of plastic waves on the strength of shells.
152. Dr. G. P. Prokof'ev (Chairman) The influence of plastic waves on the strength of shells.
153. Dr. G. P. Prokof'ev (Chairman) The influence of plastic waves on the strength of shells.
154. Dr. G. P. Prokof'ev (Chairman) Plastic waves that have been observed during prior plastic deformation.
155. Dr. G. P. Prokof'ev (Chairman) General limitations of the theory of plasticity and vibrations in structural calculations of metal structures.

ZADOYAN, M.A.

One variational equation of the nonlinear creep theory. Dokl.
AN Arm.SSR 27 no.5:277-282 '58. (MIRA 12:5)

1. Institut matematiki i mekhaniki AN ArmSSR. Predstavлено Н.К.
Арутюняном.
(Creep of materials)

SOV/179-59-1-ii/36

AUTHOR: Zadoyan, M. A. (Yerevan)

TITLE: Creep of Prismatic Compound Bars in Constrained Torsion
(Polzuchest' prizmaticheskikh sostavnykh sterzhney pri
stesnennom kruchenii)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh
nauk, Mekhanika i mashinostroyeniye, 1959, Nr 1, pp 82-88
(USSR)

ABSTRACT: The paper is a continuation of earlier work (Refs. 5, 6,
8). The bar is assumed to be made up of n prismatic bodies
possessing different Young's moduli, Poisson's ratios and
creep properties; it is clamped at one end and twisted at
the other in such a way that all displacements at the twisted
end are zero. Using standard torsion theory in conjunction
with earlier results (Refs. 5, 6, 8) an integral equation sat-
isfying the boundary conditions is derived and applied to the
case of a two-component bar, one component of which does not
show creep behaviour, for example, a ferro-concrete bar, in
which the creep of the steel is small compared with the creep
of the concrete. For such a bar, the stresses in the steel

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SOV/L9-59-1-11/36

Creep of Prismatic Compound Bars in Constrained Torsion

and in the concrete are calculated and shown graphically as a function of time (Fig.3). As a further special case, the creep of a bar consisting of concrete only is briefly considered. There are 3 figures and 9 Soviet references.

ASSOCIATION: Institut matematiki i mekhaniki Akademii nauk Armyanskoy SSR (Institute of Mathematics and Mechanics, Academy of Sciences, Armenian SSR)

SUBMITTED: June 12, 1958.

Card 2/2

ZADOYAN, M. A. Cand Phys-Math Sci --- (diss) "On ~~some~~^{certain} Problems of the Creep Theory." Mos., 1957. 77 pp 22 cm. (Mos State Univ im. M. V. Lomonosow), 100 copies (KL, 25-57, 108)

- 8 -

SOV/24-58-10-24/34

AUTHORS: Ambartsumyan, S. A., Zadoyan, M. A. (Yerevan)

TITLE: On the Problem of Elasto-Plastic Bending of Beams (K zadache uprugo-plasticheskogo izgiba balok)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, 1958, Nr 10, pp 130-132 (USSR)

ABSTRACT: The theory of bending of beams is based on the hypothesis of plane cross-sections and does not take into account the effect of tangential stresses on the form of the bent axis of the beam. This restriction is removed in the present paper and an attempt is made to determine the role of tangential stresses in elasto-plastic bending of beams. Explicit expressions are derived and these can be used to estimate the effect. The present work is a development of the treatment given by Prager and Khodzh (Ref.1) and the first of the present authors (Refs.2 and 3). There is 1 figure and there are 3 Soviet references.

ASSOCIATION: Institut matematiki i mehaniki AN Armyanskoy SSR
(Institute of Mathematics and Mechanics, AS
Armyanskaya SSR)

SUBMITTED: June 23, 1958

Card 1/1

ZADOYAN, M.A.

Partial solution of equations in the theory of ideal plasticity.
Dokl. AN Arm. SSR 39 no.5:265-269 '64. (MIRA 18:2)

1. Institut matematiki i mekhaniki AN ArmSSR. Submitted April 13, 1964.

VARSHAVSKIY, A. M., kand. tekhn. nauk; ZADOROZHNEYI, V. V., inzh.

Repair of continuous action stripping equipment. Mat. i gornorud.
prom. no.1:92-95 Ja-F '63. (MIRA 16:4)

1. Dnepropetrovskiy gornyj institut.

(Excavating machinery—Maintenance and repair)

ZADOVANNYY, V.V., podpolkovnik med.sluzhby; LOSEV, A.Ya., podpolkovnik
med.sluzhby

Indications for the designation of cardias glycosides in blood
circulation insufficiency. Sbor.nauch.trud.Kiev.okruzh.voen.
gosp. no.4:189-196 '62. (MIRA 16:5)
(CARDIAC GLYCOSIDES) (BLOOD—CIRCULATION, DISORDERS OF)

246247A61YU

GINZBURG, H.B.; ZADOYANYY, V.V. (Khar'kov)

Cerebral hemorrhage in acute nephritis. Klin.med. 35 no.6:122-123
Ju '57. (MIRA 10:8)

(NEPHRITIS, compl.
cerebral hemorrh.)

(CEREBRAL HEMORRHAGE, etiol. and pathogen.
nephritis, acute)

ZADOYANNYY, V.V., podpolkovnik meditsinskoy sluzhby (Kiyev)

Treatment of paroxysmal tachycardia using a carotid sinus novocaine
block. Vrach. delo no.12:136-137 D '61. (MLRA 15:1)
(ARRHYTHMIA) (NOVOCAINE)

ZADRAVEC, Jurica, inz. (Kranj)

Influence of dimensions on the stability of permanent
magnets. Elektr vest 30 no. 8/9:213-215 '62/'63.

1. Institute of Automation, Sector 1, Kranj.

ZADRAVKOIC, I.

Rural houses in the environs of Rristina. p. 793
(GLASNIK Vol. 2/3 1953/54 (Published 1957)

SO: Monthly List of East European Accession (EEAL) LC Vol. 6, No. 12, Dec. 1957
Uncl.

ZADRAZIL, Antonin; KLEINBAUER, Petr

Examples of operations on the SP 12 semiautomatic copying lathe.
Stroj vyr 12 no.6:407-409 Je '64.

1. Kovosvit National Enterprise, Sezimovo Usti.